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09/982,178	10/19/2001	Tai-Her Yang	YANG3080/EM/7317	7822

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EXAMINER

ESTREMSKY, SHERRY LYNN

ART UNIT PAPER NUMBER

3681

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/982,178

Applicant(s)

Yang

Examiner

Sherry Estremsky

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 65-130 is/are pending in the application.
- 4a) Of the above, claim(s) 102-130 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 65-73, 75-78, 80, 89, 90, and 95-101 is/are rejected.
- 7) ☒ Claim(s) 74, 79, 81-88, and 91-94 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

The receipt of the amendment dated March 28, 2003 of the application 09/982,178, including the substitute specification, cancellation of claims 1-64, and addition of claims 65-128 is acknowledged.

Election/Restriction

1. Applicant's election without traverse of the species of figure 2 in Paper No. 4 is acknowledged.
2. Claims 100-128 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 4.

Specification

3. The disclosure is objected to because of the following informality: on page 18, line 1, it appears "5104" should be -S104--.

Appropriate correction is required.

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Claim Objections

4. The claims are objected to because there are two claims numbered 79 and two claims numbered 93. The examiner has renumbered the claims consecutively from claim 65 to 130 under 35 CFR 1.126. Within each claim, the claim number designating dependency has also been changed where necessary to avoid a change in the parent claim on which the claim depends. Original claims 94 and 95 were both dependent on claim 93. Since both claims 94 and 95 (renumbered 96 and 97) mention layers of the two centrifugal clutches, which were first claimed in the second claim 93 (renumbered 95), the examiner has chosen to make claims which were renumbered 96 and 97 dependent on claim 95 (originally the second claim 93). Note that claims 65-101 have then been elected and claims 102-130 have been withdrawn from consideration.

5. Claim 65 is objected to because of the following informality: it appears "dynamo-electric device" in lines 13-14 should be -dynamo-electric unit-. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 73 and 95-101 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 73 is indefinite because "said transmission mechanism" lacks antecedent basis. It appears claim 73 should be dependent on claim 72, where the transmission mechanism was first claimed, rather than on claim 65.

Claim 95 (originally the second claim 93) is indefinite because "said...second centrifugal clutch(es)" lacks antecedent basis. It appears claim 95 should be dependent on claim 94 rather than on claim 93.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 65-71, 75-78, 80, 89, and 90 are rejected under 35 U.S.C. 102(b) as being anticipated by Field, U. S. Patent 6,044,922.

Field shows in figure 1 a speed-controlled dynamo-electric compound system.

Primary dynamo-electric unit 16 is arranged to rotate a shaft (from element 26 to element 14).

Centrifugal clutch 26 (column 6, lines 39-41) has a driven side connected to the shaft and a driving side connected to an engine 24 (column 6, lines 24-25, the "transfer case" being the interconnection of clutch 26 with the engine, the dynamo-electric unit 16, and the shaft). As explained below, rotation of the primary dynamo-electric unit at a preset speed causes the engagement of the centrifugal clutch 26.

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A load (wheels 12) is connected to the shaft through an output device (a not shown transmission and a differential 14).

Secondary dynamo-electric unit 28 is coupled to the engine 24.

Electrical energy storage device 18 is connected between the secondary dynamo-electric unit 28 and the primary dynamo-electric unit 16.

The system includes a controller 20.

Column 5, lines 46-54 teaches that when the primary dynamo-electric unit 16 is supplied with electricity from the energy storage device 18 to be caused to rotate at below a preset speed (as the vehicle is accelerated to a predetermined speed) the dynamo-electric unit drives the output device. When the primary dynamo-electric unit 16 is caused to rotate above the preset speed, the clutch 26 engages, thereby connecting the engine 24 to the primary dynamo-electric unit 16 to carry out the function of the engine 24 and primary dynamo-electric unit 16 (supplied with electricity from the electrical energy storage device, column 5, lines 7-9) jointly driving the load. Since column 6, lines 39-41 disclose that clutch 26 may be a centrifugal clutch, centrifugal clutches operate in response to speed, and column 5, lines 46-54 discloses the clutch 26 engages when the dynamo-electric unit 16 (and engine 24) reach a preset speed, the centrifugal clutch 26 engages to connect the engine to the shaft when the primary dynamo-electric unit 16 has a rotation of a preset speed.

(Claim 65)

The output device includes an output transmission mechanism (not shown, column 4, line 40-42).

(Claim 66)

The output transmission mechanism comprises a variable speed ratio transmission (column 4, lines 43-44).

(Claim 67)

The output device includes an output clutch (column 4, line 45).

(Claim 68)

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The output device thus includes an output transmission mechanism and an output clutch.
(Claim 69)

As is conventional, the output device (an output transmission) has a steering shaft connected to a differential gear set 14 (column 4, lines 45-49).
(Claim 70)

Axles 13 are a plurality of differential steering shafts connected to the differential gear set 14.
(Claim 71)

The engine 24 is an internal combustion engine (column 5, line 24).
(Claim 75)

The engine 24 includes a start-up and operation speed control devices 22 (column 5, line 49).
(Claim 76)

As an internal combustion engine, such as a spark ignition engine (column 5, line 28), the engine includes peripheral interface devices including a fuel system, air inlet and exhaust system, an ignition system, and a cooling system.
(Claim 77)

As an electric motor, the primary dynamo-electric unit has a characteristic that a speed of the unit becomes higher when the load becomes smaller.
(Claim 78)

The primary dynamo-electric unit is a DC motor/generator (column 4, lines 52-54 and column 6, line 19)
(Claim 80)

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Figure 1 shows a transmission mechanism for connecting the engine 24 to the second dynamo-electric unit 28.

(Claim 89)

The transmission mechanism connecting the engine and the second dynamo-electric unit is a fixed speed ratio transmission.

(Claim 90)

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 72 and 73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Field in view of Schiebold et al., U. S. Patent 6,394,924.

Field discloses a speed-controlled dynamo-electric compound system as discussed above in the rejection of claim 65, but does not disclose a transmission mechanism connected between the centrifugal clutch and the engine.

Schiebold et al. discloses in figures 1 and 8 a speed controlled dynamo-electric system including a primary dynamo-electric unit 13 driving a shaft 11, an engine 3, a centrifugal clutch 60 connecting the dynamo-electric unit, engine, and shaft when the unit is rotated at a preset speed, and a transmission mechanism 25 connected between the centrifugal clutch 60 and the engine 3.

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The transmission mechanism 25 is a variable speed ratio transmission.

It would have been obvious to one skilled in the art at the time the invention was made to modify Field to include a variable speed ratio transmission mechanism between the centrifugal clutch and the engine in view of Schiebold et al. because the variably reduced speed and increased torque from the dynamo-electric unit transmitted by the centrifugal clutch can be adjusted to fit the variable needs of the system, such as for cold starting the engine as opposed to warm starting the engine (column 4, lines 45-51).

Allowable Subject Matter

12. Claims 74, 79, 81-88, and 91-94 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. Claims 95-101 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents each disclose a speed controlled dynamo-electric system including at least one primary dynamo-electric unit arranged to rotate a shaft, a centrifugal clutch, an engine, and a load:

U. S. Patent 5,644,200 (Yang) July 1997

U. S. Patent 6,109,383 (Matsuto et al.) August 2000

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U. S. Patent 6,158,543 (Matsuto et al.) December 2000

U. S. Patent 6,260,644 (Otsu) July 2001

U. S. Patent 6,334,364 (Suzuki) January 2002

U. S. Patent 6,481,516 (Field et al.) November 2002

FACSIMILE TRANSMISSION

15. Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is **(703) 305-3597**. Recognizing the fact that reducing the cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and deliver time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence **not** permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check **should not be** submitted by facsimile transmission separately from the check.

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(Date)

Typed or printed name of person signing this certificate:

(Signature)

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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherry Estremsky whose telephone number is (703) 308-2164. The examiner can normally be reached on Monday through Thursday from 7:30 a.m. to 6:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor, can be reached at (703) 308-0830. The fax phone number for this Group is (703) 305-3597.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2168.

SLE
(703) 308-2164
June 15, 2003


SHERRY ESTREMSKY
PRIMARY EXAMINER
AU3681 6-15-03